Subject Index

Acetazolamide 329, 340
Acetyltransferase 324
Actin 54
∝-Actin 54
Adenylate cyclase 237
∝-1 Adrenergic receptors 393
Aging 371
Alkyl-acylGPE 298
1-Alkyl-glycerol 298
∝-Amanitin 93
Alzheimer's disease 72, 355
Alzheimer type II-like cells 356
Amiloride 180
γ-Aminobutyric acid transaminase 236
Ammonia 353
Anti-GC immunofluorescence 257
Anti-GFAP immunofluorescence 257
Arylsulfatase 297
Aspartate 27, 238
Aspartic acid uptake by oligodendrocytes 261
Astrocyte-enriched proteins 89
Astrocytic amino acid uptake 229
Astroglial growth factors (AGFs) 13, 14
Audiogenic seizure 338
Avidin-biotin complex (ABC) 72

Benzodiazepine 405
Bergmann radial fibres 21, 194
Biotin-Streptavidin 59
6-Biphosphatase 415
Brain slices 217
Bumetanide 177, 180

C-6 Glioma cells 372
C57/Bl mice 168
CO_2 metabolism 333
Calcitonin gene-related peptide 265
Calcium channel 412
Calcium uptake 368
Carbamazepine 410
Carbonic anhydrase 213, 323, 329, 359
Catechol-O-methyl-transferase 236
Cerebellar tissue 35
Cerebral ischemia 389
Cerebrosides 291
Chicken dorsal root ganglia 278, 284
Choline-phosphoglycerides (CPG) 295
Ciliary neuronotrophic factors 206
Cobalt implantation 334
Cobalt-induced focal seizures 337
Concanavalin A 317, 325
Cyclic AMP 61, 355
2', 3' Cyclic nucleotide phosphohydrolase 374
Cytosine arabinoside 46
Cytoskeletal proteins 384

DBA mice 331
Developing rat brain 288
Dibutiryl cyclic AMP 23, 61
Dinitrophenol 188
Dopamine 237
Double labelling immunofluorescence 38
Double staining 23, 24
Drone retina 218

Enkephalin 276
Enolase 236
∝∝-Enolase 88
Ependymins 247, 253
Epidermal growth factor 5
Epilepsy 329
  epileptogenesis 350
  epileptogenic rodent brain 415

Epilepsy (cont'd)
freezing lesions 344
focal seizures 329
human - 343
human temporal lobe - 346
lobectomies 343
Ethanolamine 296
Ethanolamine-phosphoglycerides (EPG) 295
Ethanolamine-plasmalogen 295, 307
Experimental allergic encephalomyelitis 381

Fibrin 382
Fibroblast growth factor 3, 5
Fibronectin 3, 42, 194
Forskolin 385, 393
Fructose-1 415
Fucose 55, 251
Furosemide 177, 180, 222

Gaba 23, 225
- transport 21, 23, 238
^{3}H-Gaba uptake 23
- uptake 26, 229, 262
- autoradiography 28, 258
- uptake$^+$ 29
astrocytic transport 226
neuronal - 262
during ontogenesis - 262
hepatogenic encephalopathy 366
benzodiazepine binding 410
Galactocerebroside (GalC) 5, 27, 51, 64, 292, 323
Galactolipids 319
Galactosylceramide (GC) 42, 114
GalC-positive cells 7
Ganglioside GD3 115
Ganglioside GM1 116
GLcNAc-transferase 312
Glial cells and epilepsy 343
Glial fibrillary acidic protein (GFAP) 3, 6, 13, 23
cells 6
immunostained 6
GFAP$^+$ stellate cells 23
polyclonal anti- 25
immunofluorescence 44
alpha-albumin 71
- in general neuropathology 73
- in brain tumors 73
- in body fluids 75
molecular weight 76
molecular cloning 79
- cDNA clones 80
Glial phenotypes 9
Glia-neuron interactions 209
Glucorticoids 93
Glucosylceramide 309
Glutamate 225, 226, 238
astrocytic transport 226
- uptake 227

Glutamate (cont'd)
- and aspartate uptake in oligo 258
respiratory activity 271
Glutamic acid 182
Glutamic dehydrogenase 354
Glutaminase 354
Glutamine Synthetase (GS) 88, 91, 213, 228, 236, 359, 376
regulation of - 91
chick brain 97
purification of - 98
immunocytochemical localization of - 102
double labeling 104
Glycerol 52
Glycerol phosphate dehydrogenase 6
Glycine 238
Glycoconjugates 311
Glycolipid 51, 318
Glycoproteins 56, 312
secretory - 56
developmental changes 59
Glycosaminoglycans 314
Glycosphingolipids 113, 318
Glycosylation 312
Glycosyl transferase 312
Goldfish 245
Growth factors 16, 17
abbreviations for - 16
- active on glial cells 17
monoclonal antibodies against the - 17
localization of - 17

Hepatic encephalopathy 355, 363
Heterogeneity among astrocytes 225
^{3}H-glycerol uptake 291
[^{3}H] palmitic acid 314
^{3}H-thymidine 27
Huntington's 405
Hybridomas 34
Hydroxy fatty acids 292
5-Hydroxytryptamine 393
Hyperammonemia 365

ICYP Autoradiographic grains 391
IF-proteins 393
Immunoblots 45, 282
Immunocytochemical localization 39
Immunofluorescent staining 43
Immunostaining 33
double - 33
Inositol 308
Inositol phospholipid 269
Interleukin-1 383
Intracellular recording 240
Iododeozyuridine 13
Ions 137
Isoperterenol 385
Isoproterenol 237

K^+-sensitive microelectrode 162
Kupfer cells 120

Lactic acid 183
Laminin 194, 208
Learning 245
Lectins 65
Lipid synthesis 287, 290
Lipopolysaccharide 65
L-methionine-DL-sulfoximine (MSO) 101
Lymphokines 126, 382

Major histocompatibility complex (MHC) 119
Mannose-6-phosphate 313
Maximal electroshock seizure (MES) 333
MBP 53
Membrane input resistance 150
Memory 245
Methionine 300
Microtubules 67
Monesin 318, 319
Monoamine oxidase (MAO) 236, 354
Monoclonal antibody 24
  GFA - see GFAP
  - RAN 2 24
  - LB1 25, 27
  anti-galactocerebroside (GC) 26
  cerebellar astrocytes 31
  anti-MAG- - 56
  - against CAII 107
  A2B5 - 116
  - against mouse H-2 120
  - against oligodendrocytes 129
Multiple sclerosis 119, 129
Myelin 54
  - proteins 54
  - associated glycoprotein 277
  myelination 303, 316
  regulation of myelination 316
  - basic protein (MBP) 42, 114, 133, 236
  - like membrane 325
  - sheath 295, 304

N-acetylglucosamine 313
NADPH Cytochr.c Oxido-reductase 297
(Na^+, K^+)-ATPase 140
  specific molecular machinery 140
  evolutionary significance 141
  glial - 142, 345
  neuronal - 142
  in brain - 165
  two molecular forms of - 166
  phosphorylation of - 168
  phenytoin (PHT) 170
  N-ethylmaleimide 174
  - of acute freezing lesions 344
  - hepatogenic encephalopathy 366
Nerve growth factor 206
N-ethyl-maleimide (NEM) 172
Neurominidase 314
Neurite-promoting agents 203
Neuromediators 396
Nodes of Ranvier 307
Norepinephrine 183, 237
Northern blot 82
5'Nucleotidase 297

Octanoate 188
Oligomycin 172, 174, 188
Oligosaccharide 312, 315
Ornithine decarboxylase (ODC) 93, 383
Ouabain 166
Oxytocin 193

Paranode 304
Patch-clamp 158
Phenobarbital 410
Phenytoin (PHT) 170, 172, 410
Phosphatidylcholine 307
Phosphatidylethanolamine 51
Phosphatidylinositol, 4, 5 bisphosphate 307
Phosphatidylserine 307
Phosphofructokinase 354
Phosphoglycerides 396
Phospholipid 295
Phytohaemaglutinin 65
Pituicytes 275
Plasminogen activators 193, 200
Polygonal astroglia 391
Polyribosomal clusters 358
Portocaval shunt 355
Potassium 137
  - transport in glial cells 138
  - conductance 139
  - in brain slices 140
  - channels 145, 148
  - influx 146
  - equilibrium potential 148
  - clearance 151
  - homeostatic mechanisms 153
  uptake of - 159
  pH control of K^+ channels 191
  - in metabolic interactions 215
  - effects on energy metabolism 216
  - and uptake of [^{3}H]2-deoxyglocose 220
  oxygen uptake 221
Primary focus 346
Prostaglandin D synthetase 131
Protein NS-6 250
Pyruvate 207

Rb uptake 366
Reactive astrocytes 384
Receptors expressed by astroglia 390
Respirometer 271
Reye's syndrome 188, 189
Rhodamine 23

S-100 13, 19, 64, 88
Schwann cells 303, 309, 311, 315
Seizures of hippocampal-amygdalar origin 348

Seminolipid 115
Semliki forest virus 417
Serotonin 267, 383
Single channel recording 159
SJL/J Mouse 384
Spatial buffer mechanism 138, 156, 161, 162
Sphingomyelin 307, 308
Spiking 335
Spreading depression 137
Succin. Cytochr. c Oxido-reductase 297
Sulfanilamide 333
Sulfatide 51
Sulfogalactosylceramide 114
Surface antigens 21

Tetanus toxin 24
Thioacetamide 364
Transferrin 5
Tubulin 54, 61

U251 MGsp cells 3, 5
Urea space 181
Urokinase 197

Vasopressin 275
Vimentin 46, 393
Virus infected cells 119
Volume regulation 177, 187

Western blots 35, 251
Wolfgramm protein 114